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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/904,516	07/16/2001	Nathalie Mougin	P 0281573 B00/2208 US	2271
909 7590 12/27/2007 PILLSBURY WINTHROP SHAW PITTMAN, LLP P.O. BOX 10500 MCLEAN, VA 22102				
EXAMINER WANG, SHENGJUN				
ART UNIT		PAPER NUMBER		
1617				
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12/27/2007		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

09/904,516

Applicant(s)

MOUGIN ET AL.

Examiner

Shengjun Wang

Art Unit

1617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-19, 23, 24, 30 and 32-34 is/are pending in the application.  
4a) Of the above claim(s) 1-17 and 34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18, 19, 23, 24, 30, 32, 33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

Receipt of applicants' amendments and remarks submitted October 2, 2007 is acknowledged.

#### *Claim Rejections 35 U.S.C. 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 18, 19, 23, 24, 30, 32 and 33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 18 recites "or a quaternized cationic amines have a corresponding anion which optionally is comprised of a hydrophobic group;" such limitation lacks support from the application as originally filed and constitutes new matter.

3. Claims 23 and 30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 23 and 30 recite molecular mass of "between about 400 and about 100, 000," and "about 40,000 to 80, 000," respectively, such limitation lacks support from the application as originally filed and constitutes new matter. It is noted that paragraph [0038] of the specification discloses "The number-average molecular mass of the amphiphilic cationic associative

polyurethanes of the invention is preferably between *400 and 500 000*, in particular between *1000 and 400 000* and ideally between *1 000 and 300 000*." The two examples in the application disclosed polyurethane with number-averaged molecular masses of 52,000 and 70,000 respectively.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 18, 19, 23, 24, 30, 32 and 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 18 recites L', but lacks a definition for L'. Also claims defines L'', which is not recited in the formula. The claims are indefinite as to the "L'" encompassed thereby.

7. The term "substantially" in claim 18 is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The claims are indefinite as to the water solubility of the polyurethane.

8. Claim 18 recites the limitation L" and p. There is insufficient antecedent basis for this limitation in the claim.

9. Claim 19 recites the limitation "R and R'" in line 2. There is insufficient antecedent basis for this limitation in the claim.

*Claim Rejections 35 U.S.C. 103*

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 18, 19, 23, 24, 30, 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (US 6,335,003), in further view of Munzmay et al. (5,153,297).

12. The elected inventions read on cosmetic composition comprising a cationic polyurethane produced by the reaction of at least two diisocyanate and at least one polyethylene glycol, wherein the cationic ammonium groups are with a hydrophobic groups and are at the terminals of the polyurethane.

13. Kim et al. teaches the employment of a cationic polyurethane in cosmetic preparation, wherein the polyurethane may be prepared by the reaction of at least one diisocyanate and at least one amino alcohol, diamine or triamine, wherein the diisocyanate may be alkylene, cyclic alkylene, diisocyanates, or reaction product of those basic diisocyanate with diol, diamino groups. The diol may be polyethylene glycol, polypropylene glycol with molecular weight up to 2000. See, particularly, col. 2, lines 15-58, and the claims. The amine groups in the polyurethane may be quaternized before use. The anion may be chloride, bromide, and iodide. Groups attached to the cationic nitrogen may be C1-4 alkyl groups, or C7-10 phenyl alkyl groups, meeting the limitation of hydrophobic group herein required. Further, as is customary in the making of

polyurethane, chain extender, such as diamino compounds, may be used. See, particularly, col. 4, line 33 to col. 5, line 33.

14. Kim et al do not teach expressly an example of polyurethane with terminal cationic ammonium groups.

15. However, Munzmay et al. teaches that it is known in the art that cationic groups may be at the terminal position of polyurethane. See, particularly, col. 6, line 64 to col. 7, line 2.

Therefore, it would have been prima facie obvious to a person of ordinary skill in the art, at the time the claimed invention was made, to make a polyurethane as taught by Kim et al. with cationic ammonium groups at the terminals of the polyurethane.

A person of ordinary skill in the art would have been motivated to make a polyurethane as taught by Kim et al. with cationic ammonium groups at the terminals of the polyurethane because making cationic polyurethane by quaternizing terminal groups is a known method in the art. Absent evidence to the contrary, such quaternizing method is seen as an obvious engineering choice to one of ordinary skill in the art. As to the limitation of molecular weight, it is noted that Kim require at least one diisocyanate and at least one diol, or diamino, and about 50 to 200 noncationic nitrogens, or about 20 to 100 of basic diisocyanates. Therefore, the molecular weight of the polyurethane of Kim et al. would be within the range of the claimed invention (1000 to 300,000), assuming the molecular weight of basic diisocyanate is about 200 and the molecular weight diol and/or diamino is about 200. As to the recited physical properties herein "substantially water soluble or forms a gel in water, note a chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, i.e., a polyurethane with hydrophilic moieties, the properties Applicant discloses and/or claims are

necessarily present. In re Spada, 911 F.2d 705, 709, 15 USPQ 1655, 1658 (Fed. Cir. 1990). See MPEP 2112.01. The burden is shifted to Applicant to show that the prior art product does not inherently possess the same properties as instantly claimed product.

***Response to the Arguments***

Applicants' amendments and remarks submitted October 2, 2007 have been fully considered, but are not persuasive.

Applicants' contend that Kim references teaches a polyurethane with molecular weight higher than those claimed. The arguments are not persuasive. Applicants assert that, based on alleged "well-known" knowledge, the examples in Kim will yield polyurethane with molecular weight higher than claimed herein, but provide no factual evidence that the examples in Kim are actually yield high molecular weight polyurethane. Further, applicants ignore the express teaching of Kim as to the molecular weight of the polyurethane. Kim require at least one diisocyanate and at least one diol, or diamino, and about 50 to 200 noncationic nitrogens, or about 20 to 100 of basic diisocyanates. Therefore, the molecular weight of the polyurethane of Kim et al. would be within the range of the claimed invention (40,000 to 80,000), assuming the molecular weight of basic diisocyanate is about 200 and the molecular weight diol and/or diamino is about 200.

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shengjun Wang whose telephone number is (571) 272-0632. The examiner can normally be reached on Monday to Friday from 7:00 am to 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreeni Padmanabhan, can be reached on (571) 272-0629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Shengjun Wang  
Primary Examiner  
Art Unit 1617

**SHENGJUN WANG  
PRIMARY EXAMINER**